

**BUREAU OF DRINKING WATER & GROUNDWATER**  
**SPECIAL WELL CASING PIPE DEPTH AREAS @\*\***

[authorized by s. NR 812.12(3)]

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Brown 02/25/88 <b>Area 1</b>	Town of Ledgeview ( <i>Scrays Hill</i> ) T23N, R21E - Section 32 - SW¼ - N½ of the SE¼ - S½ of the NE¼	VOCs	Contact DNR Northeast Region Office for <u>required</u> approval
Brown 08/12/08 <b>Area 81</b>	Town of Morrison ( <i>Community of Wayside</i> ) ( <i>Also a Special Area of Well Compensation Eligibility established on 03/17/06</i> ) T21N, R21E - Section 28 - S½ of the S½ except for the SW¼ of the SW¼ - Section 33 - That portion of the NE¼ of the NW¼ lying north of Wayside Creek - That portion of the NE¼ lying north of Wayside Creek - That portion of the SE¼ of the NW¼ lying north of Wayside Creek - Section 34 - That portion of the NW¼ lying west of Wayside Creek	Livestock waste	Cement-grouted casing to a depth of at least <b>250 feet</b> ; and: -- Use of rotary mud-circulation or cable-tool drilling methods only – no rotary-air methods; -- Upper-enlarged drillhole must be at least 8 ¾ -inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or grout shoe method may be used; -- Grout must be allowed to set at least 24 hours.
Calumet 02/11/88 <b>Area 2</b>	Town of Charlestown ( <i>Gravesville</i> ) (near Chilton) T18N, R20E - Section 8 - SW¼ - Section 7 - Government Lots 3 and 4 - Section 18 - Government Lots 1 and 2 - Section 17 - NW¼	Bacteria/Nitrate	Contact DNR Northeast Region Office for <u>required</u> approval
Calumet	Town of Brothertown (West Part)	Livestock waste	Cement-grouted casing to a depth of at least <b>140 feet</b> ;

@ NOTE: Section NR 812.14(1)(j) requires wells that are constructed to withdraw water from any of the aquifers beneath the “Maquoketa” Shale and the “Niagara” formation (dolomite) in the eastern part of the State shall be cased and cement-grouted at least through the “Niagara” formation. If a liner is used to case off the “Niagara” formation, the “Maquoketa” Shale formation or both, the liner shall be installed in a manner conforming with the requirements of s. NR 812.21(1).

\* NOTE: If a well is less than 1,200 feet from a landfill, a landfill variance is still required.

# NOTE: Section NR 812.(16), Wis. Adm. Code, states: When a quarry is within 1,200 feet of any proposed well, the upper enlarged drillhole and well casing pipe depth requirements shall be referenced from the bottom of the quarry. When the bottom of the existing or proposed quarry is or will be at an elevation higher than the elevation of the ground surface at the well site, this requirement does not apply. If a well site is within 1,200 feet of a quarry and is also located within a special well casing requirement area, the more stringent requirement shall be used.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
08/12/08 <b>Area 82</b>	<i>( Also a Special Area of Well Compensation Eligibility established on 10/10/06)</i> T17N, R19E <ul style="list-style-type: none"> <li>- Government Lot 103</li> <li>- Northern half of the W½</li> <li>- Northern third of the E½</li> <li>- Government Lot 104</li> <li>- Southern half of the E½</li> </ul>		and: -- Use of rotary mud-circulation or cable-tool drilling methods only – no rotary-air methods; -- Upper-enlarged drillhole must be at least 8 ¾ -inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or grout shoe method may be used; -- Grout must be allowed to set for at least 24 hours.
Chippewa 12/90 <b>Area 3</b>	Town of Hallie ( <i>North Eau Claire and Village of Hallie Area</i> ) T28N, R9W <ul style="list-style-type: none"> <li>- Section 26</li> <li>- Portions of the SW¼</li> <li>- Section 27</li> <li>- Portions of the E½ of the SE¼</li> <li>- Section 34</li> <li>- Portions of the SE¼ east of US Hwy 53</li> <li>- Section 35</li> <li>- SW¼</li> <li>- W½ of the NW¼ of the SE¼</li> <li>- Portions of the NW¼</li> </ul>	VOCs	Contact DNR West Central Region Office for <u>required</u> casing depth and better definition of affected area.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Dane 02/23/01 <b>Area 71</b>	<p>Town of Cottage Grove (<i>Hydrite Chemical Co. Area</i>)  T7N, R11E  - Sections 10, 11, 14, 15 and 16 – including the following areas:  <u>ZONE 1</u>  Section 16  NE<math>\frac{1}{4}</math>  <u>ZONE 2</u>  Section 15  SE<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math>  Section 15  SW<math>\frac{1}{4}</math> of the SE<math>\frac{1}{4}</math>  <u>ZONE 3</u>  All of the following areas not listed above in ZONE 2, including:  Section 10  S<math>\frac{1}{2}</math>  Section 11  SW<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math>  SE<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math> (that portion south of County BB)  SW<math>\frac{1}{4}</math> of the SE<math>\frac{1}{4}</math> (that portion south of County BB)  Section 14  W<math>\frac{1}{2}</math>  W<math>\frac{1}{2}</math> of the E<math>\frac{1}{2}</math>  Section 15  Entire section  Section 16  SE<math>\frac{1}{4}</math></p>	VOCs	Contact the DNR South Central Region Office for <u>required</u> approval.
Dane 09/18/00 <b>Area 4</b>	<p>Town of Middleton (<i>Refuse Hideaway Landfill Area</i>)  T7N, R8E  - Section 7  NE<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math>  SE<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math>  SE<math>\frac{1}{4}</math>  S<math>\frac{1}{2}</math> of the NE<math>\frac{1}{4}</math> of the NE<math>\frac{1}{4}</math>  SE<math>\frac{1}{4}</math> of the NE<math>\frac{1}{4}</math>  - Section 8  S<math>\frac{1}{2}</math> of the NW<math>\frac{1}{4}</math> of the NW<math>\frac{1}{4}</math>  SW<math>\frac{1}{4}</math> of the NW<math>\frac{1}{4}</math>  That portion of the NW<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math> lying north &amp; west of Twin Valley Road and north of US Highway 14  That portion of the SW<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math> north &amp; west of Twin Valley Road  S<math>\frac{1}{2}</math> of the NE<math>\frac{1}{4}</math> of the NW<math>\frac{1}{4}</math>  SE<math>\frac{1}{4}</math> of the NW<math>\frac{1}{4}</math>  That portion of the NE<math>\frac{1}{4}</math> of the SW<math>\frac{1}{4}</math> lying north of Highway 14</p>	VOCs	Contact the DNR South Central Region Office for the <u>required</u> casing depth.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Dane 01/01/94 <b>Area 68</b>	Town of Middleton ( <i>Cherrywood Subdivision Area</i> ) T7N, R8E - Section 30	Bacteria	<u>Recommended</u> 275 feet of casing to terminate into the St. Peter Sandstone
Dodge 04/23/97 <b>Area 5</b>	Town of Beaver Dam ( <i>Rolling Meadows Subdivision</i> ) T12N, R14E - Section 20 - N½ and east of the railroad tracks - Section 21 - NW¼	Bacteria	<u>Recommended</u> Cement-grouted casing at least 15 feet into the St. Peter sandstone
Dodge 10/6/72 <b>Area 6a</b>	Town of Leroy ( <i>Area of Shallow Niagara Dolomite</i> ) T13N, R16E - Section 22 - SE¼ - Section 23 S½ - Section 26 - N½ - Section 27 - NE¼	Bacteria	Casing to base of Maquoketa Shale <u>required</u> .
Dodge 10/6/72 <b>Area 6b</b>	Town of Leroy ( <i>Area of Shallow Niagara Dolomite</i> ) T13N, R16E - Sections 22, 23, 26 and 27 – Those portions that are not in Area 6a (above). - Section 24 - W½ - Section 25 - W½	Bacteria	Contact DNR South Central Region Office for <u>required</u> casing depth amount.
Dodge 04/02/97 <b>Area 7</b>	Town of Lomira ( <i>Knowles Area</i> ) (Area of Shallow Niagara Dolomite) T13N, R17E - Section 19 - S½ of the SE¼ - Section 30 - N½ of the NE¼	Bacteria	Wells completed below Maquoketa Shale <u>must</u> be cased and grouted through entire Maquoketa Shale unit

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Dodge 04/03/09 Area 88	Town of Lomira <i>(Also a Special Area of Well Compensation Eligibility)</i> T13N, R17E - Section 9 - NW¼ (Entire quarter section)	Livestock Waste	Cement-grouted casing required to a depth of approximately 380 feet, <b>but in any case to a depth at least through the Maquoketa Shale Confining Formation</b> ; and: -- Use of rotary mud-circulation or rotary-air drilling methods; -- Upper-enlarged drillhole must be at least 8 ¾ -inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or Grout Shoe method may be used; -- Grout must be allowed to set for at least 24 hours.
Dodge 08/12/08 Area 83	Town of Lowell <i>(Also a Special Area of Well Compensation Eligibility established on 07/01/07)</i> T10N, R14E - Section 30 - NE ¼ (A 23-acre parcel southwest of the intersection of Fischer and Maiden Lane Roads)	Livestock Waste	Cement-grouted casing to a depth of at least <b>110 feet</b> ; and: -- Use of rotary mud-circulation or cable-tool drilling methods only – no rotary-air methods; -- Upper-enlarged drillhole must be at least 8 ¾ -inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or grout shoe method may be used; -- Grout must be allowed to set for at least 24 hours.
Door 11/05/57 10/25/71 08/06/74 01/01/06 Area 8a	Entire County ( <i>Area of high bedrock</i> )	Bacteria	100 to 140' to 170' casing <u>required</u> ; And a transition zone where Dept. approval required. See DNR maps Contact DNR Northeast Region Office for <u>required</u> casing depth in transition-zoned areas
Door 08/13/90 Area 9	Entire County ( <i>Pesticide Mixing Sites</i> ) - Within 1,200 feet of pesticide mixing sites. - (Contact DNR Northeast Region Office for a map of the mixing sites.)	Lead/Arsenic	Contact DNR Northeast Regional Office for <u>required</u> casing depth.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Door 03/19/09 <b>Area 86</b>	Town of Sevastopol ( <i>Runaway Lodge Motel Property</i> ) T28N, R27E - Sections 18 - NE ¼, NW ¼ [One property only, described as: Door Co. Parcel I.D. No. 0220318282721D1]	Livestock waste	Cement-grouted casing to a depth of at least <b>350 feet</b> ; and: -- Use of rotary mud-circulation drilling methods only -- Rotary-air methods may not be used; -- Upper-enlarged drillhole must be at least 8 ¾ -inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or grout shoe method may be used; -- Grout must be allowed to set at least 24 hours.
Dunn 12/90 <b>Area 10</b>	Town of Red Cedar ( <i>Village of Rusk</i> )( <i>Ag Coop</i> ) T28N, R12W - Sections 8, 15, 16, 17 and 18 (portions of these sections)	Herbicides	Contact DNR West Central Region Office for <u>required</u> approval and better definition of affected area
Eau Claire 06/4/92 <b>Area 11</b>	Town of Washington ( <i>Closed Landfill – Papermill Sludge</i> ) T27N, R8W - Sections 20 and 29 (West portion) - The area bounded on the east by Six-Mile Creek, on the west by the eastern boundary of sections 19 & 30, on the north by the Eau Claire River, and on the south by the southern boundary of the Pope and Talbot property with that southern boundary line running east to intersect Six-Mile Creek	VOCs	Any new water supply well constructed shall be sampled upon completion and tested for volatile organic compounds (VOC's) using EPA Method 502.2 or 524.2 and the results sent to the West Central Region Office to determine <u>required</u> casing depth.
Florence 11/04/97 01/22/07 02/20/07 03/21/07 05/01/12 <b>Area 12</b>	<b><i>Florence County (The Entire area of Florence County is included in this special area)</i></b>  [Note: Previously, in the time period between 11/04/97 & 01/22/2007, this area included only a small portion of the Town of Aurora (of Florence County) near <i>Hillcrest School in the Menomonee River Area</i> ]	Naturally occurring Arsenic	No special well construction required. Any new or reconstructed well installed on or after January 22, 2007 must be sampled for arsenic at a lab certified to do that analysis. These sample results must be submitted to the well owner and DNR. (This requirement applies to both unconsolidated formation & bedrock wells.)
Fond du Lac 08/12/07 03/25/09 <b>Area 84</b>	Town of Byron <b><i>[Also a Special Area of Well Compensation Eligibility (SAWCE) established on 08/15/07&amp; 03/25/2009]</i></b> T14N, R17E - Sections 32 and 33 (entire sections) <u>Note</u> : The Special Area of Well Compensation Eligibility includes the NW ¼ of Section 32 and all of Section 33 but does <u>not</u> include the NE ¼, the SE ¼ or the SW ¼ of Section 32. <b>Area 84</b> was initially established on 08/12/07 to include all of Section 33. The area was expanded on 03/25/09 to also include all of Section 32 as a SWCDA with the NW¼ thereof established as part of the SAWCE)	Livestock Waste	Cement-grouted casing required to a depth of approximately <b>500 feet, but in any case to a depth at least through the Maquoketa Shale Formation</b> ; and: -- Use of rotary mud-circulation or cable-tool drilling methods only – no rotary-air methods; -- Upper-enlarged drillhole must be at least 8 ¾ -inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or grout shoe method may be used; -- Grout must be allowed to set for at least 24 hours.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Fond du Lac 08/15/04 <b>Area 78a</b> (Inner Area)	Town of Ripon ( <i>Ripon FF/NN CO. Highways Landfill Site</i> ) T16, R14E - Section 7 - S½ of the SE¼ - Section 18 - N½ of the NE¼ - S½ of the NE¼ (That portion lying north of both Silver Creek and S. Koro Road) - N½ of the SE¼ (That portion lying north of Silver Creek)	VOCs, primarily vinyl chloride and cis-1,2-Dichloroethylene (DCE)	<b><u>Inner Area</u></b> Either unconsolidated aquifer wells or Precambrian bedrock wells. Precambrian bedrock wells must be cased and cement-grouted to at least the top of the Precambrian. (Hydrofracturing of Precambrian bedrock wells is <b>not</b> allowed.)
Green 02/12/10 <b>Area 92</b>	Town of Monroe ( <i>Also a Special Area of Well Compensation Eligibility established on 02/12/10</i> ) T2N, R7E - Section 18 - SE ¼ of the NW ¼	Livestock Waste ( <i>Bovine Bacteriodes</i> )	-- Cement-grouted casing to a Min. depth of <b>160 ft.</b> -- Upper-enlarged drillhole must be at least 8 ¾ -inch dia. for 6-inch wells or 2 inches larger than nominal casing diameter for larger dia. wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only use of Bradenhead or Grout Shoe method; -- Grout must be allowed to set for at least 24 hrs.
Fond du Lac 08/15/04 <b>Area 78b</b> (Outer Area)	Town of Ripon ( <i>Ripon FF/NN CO. Highways Landfill Site</i> ) T16, R14E - Section 7 - S½ except for the S½ of the SE¼ thereof - Section 8 - W½ of the SW¼ - Section 17 - W½ of the NW¼ (That portion lying north of Silver Creek and west of Silver Creek's northern tributary) - Section 18 - NW¼ (That portion lying north of both Silver Creek and S. Koro Road and north of Highway 23/49) - None of the area described above within the "Inner Area" of Area 78a.	VOCs, primarily vinyl chloride and cis-1,2-Dichloroethylene (DCE)	<b><u>Outer Area</u></b> An attempt shall first be made to construct an unconsolidated formation well.  When an unconsolidated formation well is not successful then, only with prior Department approval, a Cambrian Sandstone well may be constructed. When approved, such a well must be cased and cement-grouted at least to the top of the Cambrian Sandstone.
Jackson 01/12/94 <b>Area 13</b>	Town of Brockway/City of Black River Falls ( <i>City Landfill Area</i> ) T21N, R4W - Section 11 - Portions of the SE¼ - Portions of the SW¼ - Section 14 - That portion of the NE¼ located northeast of Interstate Highway 94, north of Old State Highway 54, west of Levis Creek Road, south of Levis Creek and east of the Black River. - (Contact DNR West Central Region Office for detailed map of area.)	VOCs	Contact DNR West Central Region Office for <u>required</u> special casing depth.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Jackson 10/23/96 <b>Area 14</b>	Town of Northfield ( <i>Village of Northfield Lust Sites</i> ) T23N, R6W - Section 22 - Starting at the southwest corner of the SE¼ of the NW¼ of; then east along the south line of the SE¼ of the NW¼ to the numbered tributary of Pigeon Creek 22-BBC; then northwesterly along tributary 22-BBC to Pigeon Creek; then westerly along Mill Road to CTH FF; then southerly along CTH FF and along the west line of the SE¼ of the NW¼ of Section 22 to the point of beginning.	VOCs	Cement-grouted casing 10' into sandstone bedrock <u>required</u> . (About 100' to sandstone) Upper-enlarged drillhole <u>must</u> be at least 10-inch diameter. A VOC sample is <u>required</u> . The Well Driller <u>must</u> notify DNR West Central Region at least 48 hours prior to the construction of the well.
Jefferson 06/8/99 <b>Area 15a</b>	Town of Koshkonong ( <i>Superior Valley Meadows Landfill Area</i> ) (Zone 1) T5N, R14E - Sections 25, 26, 35 and 36 - Within the area bounded by the western boundary Section 35 and 26, south of Creamery Road, west of Highway 12, south of Cheesbrough Road, west of Buckingham Road, south of Meske Road, and west of Galloway Creek. And north of the ½ section line of Sections 35 and 36, from Galloway Creek to the western boundary of Section 35.	VOCs	240' of casing with cement grout <u>required</u> .
Jefferson 06/8/99 <b>Area 15b</b>	Town of Koshkonong ( <i>Superior Valley Meadows Landfill Area</i> ) (Zone 2) T5N, R14E - Sections 25, 26, 35 and 36 (The remainder of these sections not included in Area 15a above.) - Section 27 - SE¼ -- The area east of Allen Creek. - Section 34 - N½ -- The area east of Allen Creek.	VOCs	Contact DNR South Central Region Office for <u>required</u> approval
Jefferson 06/8/99 <b>Area 15c</b>	Town of Koshkonong ( <i>Superior Valley Meadows Landfill Area</i> ) (Zone 3) T5N, R14E - Section 27 - SE ¼ east of Allen Creek - Section 34 - N ½ east of Allen Creek	VOCs	<u>Recommended</u> Contact DNR South Central Region Office for approval
Kewaunee 11/5/57 10/25/71 8/6/74 6/04/13 <b>Area 8b</b>	Town of Red River ( <i>Extension of Door Co Special Casing Depth Area</i> ) T25N, R23E -Sections 1 through 6	Bacteria	100 feet of casing <u>required</u>
Kewaunee 11/5/57 10/25/71 8/6/74 6/4/13 <b>Area 8b</b>	Town of Lincoln ( <i>Extension of Door Co Special Casing Depth Area</i> ) T25N, R24E -Sections 1 through 6	Bacteria	140 feet of casing <u>required</u>

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Kewaunee 5/29/2013 Area 99	Town of Lincoln (Also a Special Area of Well Compensation Eligibility) T25N, R24E -SW ¼ of NE ¼ of Section 19	Livestock Waste ( <i>Bovine Bacteroides</i> )	200 feet of cement grouted casing Bradenhead Grouting Method

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Kewaunee 11/5/57 10/25/71 08/6/74 6/4/13 <b>Area 8b</b>	Town of Ahnapee ( <i>Extension of Door Co Special Casing Depth Area</i> ) T25N, R25E - Sections 3 through 6 T25N, R25E and R26 - Sections 1 and 2 - Section 6	Bacteria	140 feet of casing <u>required</u> in Sections 3 through 6 of R25E.  100 feet of casing <u>required</u> in Sections 1 and 2 of R25E and Section 6 of R26E.
Lincoln 09/27/95 12/2/96 Rev. 02/22/01 <b>Area 17</b>	Town of Merrill ( <i>Merrill Landfill Area</i> ) T32N, R7E - Section 29 - SW¼ - Section 30 - SE¼ - Section 31 - NE¼ - Section 32 - NW¼, only that portion north & west of the Prairie River	VOCs	Contact the DNR Northern Region Office in Rhinelander for <u>required</u> approval
Manitowoc 09/14/88 <b>Area 18/19</b>	Town of Cato ( <i>Lemberger Landfill Site</i> ) (Also see Town of Franklin – Manitowoc County listing below.) T19N, R22E - Section 1 - NW¼ of the NW¼ - Section 2 - N½ of the N½ - Section 3 - N½ of the N½	VOCs	Contact DNR Northeast Region Office for <u>required</u> approval
Manitowoc 04/01/09 <b>Area 87</b>	Town of Cato ( <i>Also a Special Area of Well Compensation Eligibility</i> ) T19N, R22E - Section 8 - SE¼ of the SE¼ - Section 17 - NE¼ of the NE¼	Livestock waste	Cement-grouted casing to a depth of at least <b>250 feet</b> ; and: -- Use of rotary mud-circulation or rotary-air drilling methods -- Upper-enlarged drillhole must be at least 8 ¾-inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or Grout Shoe method may be used; -- Grout must be allowed to set at least 24 hours before further drilling commences.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Manitowoc 08/12/08 <b>Area 85</b>	Town of Cooperstown <i>(Also a Special Area of Well Compensation Eligibility)</i> T21N, R22E <ul style="list-style-type: none"> <li>- Section 1 (entire section)</li> <li>- Section 2 <ul style="list-style-type: none"> <li>- E½</li> </ul> </li> <li>- Section 12 <ul style="list-style-type: none"> <li>- N½ of the N½</li> </ul> </li> <li>- Section 13 <ul style="list-style-type: none"> <li>- N½ of the NE¼</li> </ul> </li> </ul>	Livestock Waste	Cement-grouted casing to a depth of at least <b>170 feet</b> , required, and: <ul style="list-style-type: none"> <li>-- Use of rotary mud-circulation or cable-tool drilling methods only – no rotary-air methods;</li> <li>-- Upper-enlarged drillhole must be at least 8 ¾ -inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger wells;</li> <li>-- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal &amp; be verified with a mud balance;</li> <li>-- Only Bradenhead or grout shoe method may be used;</li> <li>-- Grout must be allowed to set for at least 24 hours.</li> </ul>
Manitowoc 09/14/88 09/01/10 <b>Area 19/18</b>	Town of Franklin ( <i>Lemberger Landfills Site</i> ) T20N, R22E <ul style="list-style-type: none"> <li>- Section 22 (Entire Section)</li> <li>- Section 23 (Entire Section)</li> <li>- Section 24 <ul style="list-style-type: none"> <li>- W ½ of the W ½</li> </ul> </li> <li>- Section 25 <ul style="list-style-type: none"> <li>- W ½ of the W ½</li> </ul> </li> <li>- Section 26 (Entire Section)</li> <li>- Section 27 (Entire Section)</li> <li>- Section 34 (Entire Section)</li> <li>- Section 35 (Entire Section)</li> <li>- Section 36 <ul style="list-style-type: none"> <li>- W ½ of the W ½</li> </ul> </li> </ul>	VOCs	Cement-grouted casing to a depth of at least <b>250 feet</b> , required; and: <ul style="list-style-type: none"> <li>-- Upper-enlarged drillhole (UED) must be at least 4 inches larger in diameter than nominal casing diameter;</li> <li>-- If rotary-mud methods used. the UED may be reduced to 8-¾ inch diameter (for 6-inch wells).</li> <li>-- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal &amp; be density must be verified with a mud balance;</li> <li>-- Only Bradenhead Grouting method may be used;</li> <li>-- Grout must be allowed to set for at least 24 hours before lower open bedrock drillhole is constructed.</li> </ul>
Manitowoc 04/11/13 <b>Area 98</b>	Town of Gibson (Special Area of Well Compensation Eligibility) T21N, R23E <ul style="list-style-type: none"> <li>- SW ¼ of SW ¼ of Section 30</li> </ul>	Livestock Waste	Cement-grouted casing to a depth of at least 180 feet required. Braden-head or grout-shoe, 24 hour set time.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Manitowoc 10/1/93 <b>Area 20</b>	Town of Kossuth ( <i>Francis Creek Area: Sinkholes &amp; Farm Drainage Wells</i> ) T20N, R23E <ul style="list-style-type: none"> <li>- Section 16</li> <li>- S½ of the SW¼</li> <li>- Section 17</li> <li>- S½ of the S½</li> <li>- Section 18</li> <li>- S½ of the SE¼</li> <li>- Section 19</li> <li>- E½</li> <li>- Section 20</li> <li>- Entire section</li> <li>- Section 21</li> <li>- W½</li> <li>- Section 28</li> <li>- W½</li> <li>- Section 29</li> <li>- Entire section</li> <li>- Section 30</li> <li>- E½</li> <li>- Section 32</li> <li>- N½</li> <li>- Section 33</li> <li>- NW¼</li> </ul>	Bacteria	Contact DNR Northeast Region Office for <u>required</u> casing depth.
Marathon 04/21/09 <b>Area 89</b>	Town of Easton ( <i>Also a Special Area of Well Compensation Eligibility</i> ) T29N, R9E <ul style="list-style-type: none"> <li>- Section 32</li> <li>- SE¼ of the SE¼ (Entire quarter-quarter section)</li> </ul>	Livestock Waste	<b>Cement-grouted casing required to a depth of at least 80 feet, and:</b> -- Use of rotary mud-circulation or rotary-air drilling methods; -- Cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal & be verified with a mud balance; -- Only Bradenhead or Grout Shoe method may be used; -- Grout must be allowed to set for at least 24 hours.
Milwaukee 12/01/67 <b>Area 21</b>	City of Franklin ( <i>"Hale Park Highlands" Subdivision Area LUST Case</i> ) T5N, R21E <ul style="list-style-type: none"> <li>- Section 6</li> <li>- That portion of the NE¼ of Section 6 bounded on the west and north by Carroll Circle, on the south by an imaginary line extending eastward from the intersection of West Somerset Drive to intersect North Cape Road and Forest Home Avenue, including all lots abutting the eastern side of Forest Home Avenue in the affected area.</li> </ul>	Petroleum products	Greater than 40' into the bedrock <u>required</u>

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Milwaukee 01/22/97 <b>Area 22</b>	Village of River Hills ( <i>Greenbrook Subdivision – Silurian Reef Deposit</i> ) T8N, R22E - Section 6 - SE¼	Naturally-occurring tar and asphaltum found at top of bedrock.	Cement-grouted casing <u>required</u> to the 200-foot depth if this contaminated layer is encountered. Contaminated layer is usually found at the top of bedrock at about the 130-foot depth.
Oconto 10/88 <b>Area 23a</b>	Town of Lakewood ( <i>Lakewood DX Gas Station LUST Site</i> ) (near intersection of STH 32 & Rugg Rd) T33N, R16E - Section 30 - SE¼ of SW¼ -- That portion south of McCaslin Creek - W½ of SW¼ of SE¼ - SW¼ of NW¼ of SE¼ -- That portion south of McCaslin Creek - Section 31 - NE¼ of NW¼ -- That portion north of Chain Lake Road - W½ of the NW¼ of NE¼	VOCs	Contact DNR Northeast Region Office for <u>required</u> approval. (Water treatment may be necessary.)
Oconto 10/88 <b>Area 23b</b>	Town of Lakewood ( <i>Mid-Town Gas Station LUST Site</i> ) (near intersection of STH 32 & CTH F) T33N, R16E - Section 32 - NW¼ of the NE¼ - SW¼ of NE¼ -- That part north of STH 32	Gasoline	155 feet of casing or contact DNR Northeast Region Office for <u>required</u> approval.
Outagamie 10/01/04 11/12/04 09/14/05 <b>Area 79a</b>	Entire County ( <i>“Arsenic Requirement Area”</i> ) (This “Special Well Casing Depth Area” supercedes both the “Arsenic Advisory Area” and Areas 74 & 75, above.)	Naturally occurring inorganic arsenic	<u>Required</u> <b>Option A</b> – Galena-Platteville Dolomite Aquifer wells no deeper than the red numbers on the gray shaded areas of the Township maps. <b>Option B</b> – A well cased & cement-grouted at least to the Cambrian Sandstone to the depths indicated in black on the Township maps.
Outagamie 06/15/03 <b>Area 74a</b>	Town of Center ( <i>“Earthrock Subdivision” Area</i> ) T22N, R17E Sections 28, 29 & 30 - ½ of each of these sections - Sections 31, 32 & 33 (Entire sections)	Naturally occurring inorganic arsenic	Either a shallow Galena-Platteville Dolomite aquifer well; <u>or</u> a well with cement-grouted casing extending to at least the 200-foot depth is <u>required</u> .
Outagamie 06/15/03 <b>Area 74b</b>	Town of Grand Chute ( <i>“Earthrock Subdivision” Area</i> ) T21N, R17E Sections 4, 5 & 6 (Entire sections)	Naturally occurring inorganic arsenic	Either a shallow Galena-Platteville Dolomite aquifer well; <u>or</u> a well with cement-grouted casing extending to at least the 200-foot depth is <u>required</u> .
Outagamie 07/15/03 <b>Area 75</b>	Town of Greenville ( <i>“Seasons Field” &amp; “Farms at South Creek” Subds. Areas</i> ) T21N, R16E - Sections 16 & 20 (Entire sections)	Naturally occurring inorganic arsenic	Casing <u>required</u> to the 160-foot depth or to the top of firm bedrock, whichever is greater.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Outagamie 03/2/88 <b>Area 25</b>	Village of Bear Creek ( <i>Waugamie FS Coop Area</i> ) T24N, R15E <ul style="list-style-type: none"> <li>- Those areas that lie east of the Chicago and Northwestern Railroad right-of-way that are in:</li> <li>- Section 19</li> <li>- SW¼ of the SE¼</li> <li>- Section 30</li> <li>- W½ of the NE¼</li> <li>- W½ of the E½ of NE¼</li> </ul>	Pesticides	Contact DNR Northeast Region Office for <u>required</u> casing depth.
Outagamie 02/11/88 <b>Area 26</b>	Town of Osborn ( <i>Dunbar Service Station Gasoline Spill</i> ) ( <i>City of Seymour</i> ) ( <i>Intersection of Highways 54 &amp; 55</i> ) (Area now served by Seymour municipal water) T23N, R18E <ul style="list-style-type: none"> <li>- Section 4</li> <li>- N½</li> <li>- Section 5</li> <li>- E½ of E½ of the NE¼</li> </ul>	Gasoline	150' casing <u>required</u>
Ozaukee 09/1/00 <b>Area 70</b>	Town of Cedarburg ( <i>Kohlwey LUST Site</i> ) T10N, R21E <ul style="list-style-type: none"> <li>- Section 14</li> <li>- S½ of the SW¼ of the SE¼</li> </ul>	VOCs – Petroleum/Gasoline	130' cement-grouted casing <u>required</u>
Ozaukee 01/22/97 <b>Area 27</b>	City & Town of Cedarburg ( <i>Prochnow Landfill</i> ) T10N, R21E <ul style="list-style-type: none"> <li>- Section 22</li> <li>- S½</li> <li>- Section 23</li> <li>- S½</li> <li>- Section 26 (Entire section)</li> </ul>	VOCs	Any new water supply well constructed or an existing water supply well reconstruction <u>shall</u> be sampled upon completion and tested for volatile organic compounds (VOCs) using EPA Method 502.2 or 524.2 and the results sent to the DNR Southeast Region Office.  <u>Recommended</u> Connection to municipal water system, if possible.
Ozaukee 01/22/97 <b>Area 28</b>	Town & Village of Grafton ( <i>Lime Kiln Landfill &amp; Quarry</i> ) T10N, R21E <ul style="list-style-type: none"> <li>- Section 25</li> </ul>	VOCs	Any new water supply well constructed or an existing water supply well reconstruction <u>shall</u> be sampled upon completion and tested for volatile organic compounds (VOCs) using EPA Method 502.2 or 524.2 and the results sent to the DNR Southeast Region Office.  <u>Recommended</u> Connection to municipal water system, if possible.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Ozaukee 01/16/91 <b>Area 29a</b>	Village of Thiensville ( <i>Personal Auto LUST Site</i> ) T9N, R21E - Sections 22 and 23 - Those portions of these sections that extend 400 feet north and 400 feet south of Spring Street and eastward from the C. M. St. P. & P. Railroad right-of-way to the Milwaukee River	VOCs	140' casing <u>required</u>
Ozaukee 01/16/91 <b>Area 29b</b>	Village of Thiensville ( <i>Spur Gas Station LUST Site</i> ) (Roettgers Oil) T9N, R21E Sections 14, 15, 22 and 23 - Those portions of these sections that extend 200 feet north and 200 feet south of Freistadt Road and eastward from the C. M. St. P. & P Railroad right-of-way to a north/south line 200 feet east of the intersection of Freistadt Road and STH57.	VOCs	160' casing <u>required</u> .
Pierce 10/97 <b>Area 30</b>	Town of Trenton ( <i>Hager City Area</i> ) T24N, R18W - Section 7 (Portions of this section) (Contact West Central Region Office for better definition of affected area.)	TCE (Trichloroethylene)	Casing <u>shall</u> extend to a depth 5 to 10 feet above sandstone or to the 200-foot depth, whichever is shallower. If depth to sandstone is less than 180 feet, contact DNR's West Central Region Office for <u>required</u> casing depth.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Racine 03/26/2013 <b>Area 97</b>	Town of Burlington ( <i>This is also a Special Area of Well Compensation Eligibility</i> ) T2N, R19E - NW ¼ of Section 10	Livestock Waste	Cement-grouted casing <u>shall</u> extend to a minimum of 120 feet below ground surface.
Rock 08/15/03 <b>Area 76</b>	Town of Fulton ( <i>Sand &amp; gravel &amp; industrial landfills</i> ) (near Edgerton) T4N, R12E - Section 3 - That portion lying south of Hwy 59 and west of N Rock River Rd - Section 10 - That portion lying east of Saunders Creek, south of Hwy 59 and west of N Rock River Rd - Section 11 - That portion lying west of the Rock River, south of West Watts Springs Rd & east of East Watts Springs Rd to its northeasterly extension and, from that point, straight east to the Rock River - Section 14 - That portion lying west and north of the Rock River - Section 15 - That portion lying north of the Rock River and east of Saunders Creek	VOCs, especially trichloroethylene (TCE)	Cement-grouted casing <u>shall</u> extend at least 30 feet into bedrock <u>and</u> to a depth of at least 225 feet.
Rock 10/01/11 <b>Area 96</b>	Town of Beloit (Natures Ridge et. al.) T1N, R12E - W ½ Section 14 - NE ¼ of the E ½ of Section 15  - W ½ of Section 23	Bacteria and Nitrate	Cement-grouted casing <u>shall</u> extend to a minimum depth of 150 feet in Sections 14 and 15.  Cement-grouted casing <u>shall</u> extend to a minimum depth of 120 feet in Section 23
Rock 03/4/97 <b>Area 31</b>	Town of Turtle ( <i>Village of Shopiere Area</i> ) T1N, R13E - Section 3 - SE¼ (Rectangular area that encompasses the Village)	Bacteria	Cement-grouted casing required to extend to at least the 120-foot depth or to 15 feet into the sandstone bedrock formation, whichever is the greater depth. Contact DNR South Central Region Office for better definition of the specific area.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Saint Croix 05/01/09 <b>Area 90</b>  and  <b>Area 91</b> 06/05/09	Town of Emerald <i>(These are also Special Areas of Well Compensation Eligibility)</i> T30N, R16W - Section 22 (Area 90) - NW¼ of the SW¼ (Entire quarter-quarter section)  - Section 11 (Area 91) - N ½ of the SW¼ (Entire north half of quarter section)	Livestock Waste	Cement-grouted casing to extend to a depth at least into the Jordan (Cambrian) Sandstone, which will be encountered at a depth of about 250 to 260 feet below ground surface; and: -- The upper-enlarged drillhole must be at least 8 ¾ - inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger diameter wells; -- The cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal. & be verified with a mud balance; -- Only the Bradenhead or Grout Shoe method may be used; -- The grout must be allowed to set for at least 24 hours.
Saint Croix 04/15/10 <b>Area 93</b>	Town of Emerald <i>(This is also a Special Areas of Well Compensation Eligibility)</i> T30N, R16W - Section 10 - SE¼ of the SE¼ (Rectangular, 4-acre parcel in the SE Corner of Section 10)	Livestock Waste	Cement-grouted casing to extend to a depth at least 40 into the Jordan (Cambrian) Sandstone, which will necessitate cement-grouted casing to a depth of about 205 feet below ground surface; and: -- The upper-enlarged drillhole must be at least 8 ¾ - inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger diameter wells; -- The cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal. & be verified with a mud balance; -- Only the Bradenhead or Grout Shoe method may be used; -- The grout must be allowed to set for at least 24 hours.
Saint Croix 04/16/10 <b>Area 94</b>	Town of Forest <i>(This is also a Special Area of Well Compensation Eligibility)</i> T31N, R15W - Section 30 - NE¼ of the NE¼ (Entire quarter-quarter section)	Livestock Waste	Cement-grouted casing to extend to a depth at least 40 into the Jordan (Cambrian) Sandstone, which will necessitate cement-grouted casing to a depth of about 280 feet below ground surface; and: -- The upper-enlarged drillhole must be at least 8 ¾ - inch diameter for 6-inch wells or 2 inches larger than nominal casing diameter for larger diameter wells; -- The cement grout must be ordered from commercial concrete company, have a density of at least 15.2 lbs./gal. & be verified with a mud balance; -- Only the Bradenhead or Grout Shoe method may be used; -- The grout must be allowed to set for at least 24 hours.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Saint Croix 10/90 Revised 7/92, 10/90, 10/2/96 <b>Area 32</b>	Town of Hudson ( <i>Junker Landfill, Nor-Lake Area, etc.</i> ) T29N, R19W <ul style="list-style-type: none"> <li>- Sections 13, 14, 15 (Entire sections)</li> <li>- Section 16               <ul style="list-style-type: none"> <li>- SW<math>\frac{1}{4}</math></li> <li>- S<math>\frac{1}{2}</math>, N<math>\frac{1}{2}</math>, SE<math>\frac{1}{4}</math></li> <li>- S<math>\frac{1}{2}</math>, SE<math>\frac{1}{4}</math></li> <li>- W<math>\frac{1}{2}</math>, NW<math>\frac{1}{4}</math></li> </ul> </li> <li>- Section 17               <ul style="list-style-type: none"> <li>- N<math>\frac{1}{2}</math> <ul style="list-style-type: none"> <li>- That portion lying east of the Willow River</li> </ul> </li> </ul> </li> <li>- N<math>\frac{1}{2}</math>, S<math>\frac{1}{2}</math></li> <li>- SE<math>\frac{1}{4}</math>, SE<math>\frac{1}{4}</math></li> <li>- Section 18               <ul style="list-style-type: none"> <li>- N<math>\frac{1}{2}</math> of the S<math>\frac{1}{2}</math> <ul style="list-style-type: none"> <li>- That portion lying east of Willow River.</li> </ul> </li> <li>- S<math>\frac{1}{2}</math> of the N<math>\frac{1}{2}</math> <ul style="list-style-type: none"> <li>- That portion lying east of Willow River.</li> </ul> </li> </ul> </li> <li>- Section 21               <ul style="list-style-type: none"> <li>- NE<math>\frac{1}{4}</math></li> <li>- NW<math>\frac{1}{4}</math> <ul style="list-style-type: none"> <li>- That portion lying north of the Chicago &amp; Northwestern Railroad</li> </ul> </li> </ul> </li> <li>- Section 22               <ul style="list-style-type: none"> <li>- NW<math>\frac{1}{4}</math></li> </ul> </li> <li>- Section 24               <ul style="list-style-type: none"> <li>- NW<math>\frac{1}{4}</math> <ul style="list-style-type: none"> <li>- That portion lying north of State Hwy 12</li> </ul> </li> <li>- N<math>\frac{1}{2}</math>, NE<math>\frac{1}{4}</math></li> <li>- N<math>\frac{1}{2}</math>, SE<math>\frac{1}{4}</math>, NE<math>\frac{1}{4}</math></li> <li>- S<math>\frac{1}{2}</math>, of the SE<math>\frac{1}{4}</math> of the NE<math>\frac{1}{4}</math> <ul style="list-style-type: none"> <li>- That portion located east of Polen Drive</li> </ul> </li> <li>- NE<math>\frac{1}{4}</math> of the SE<math>\frac{1}{4}</math> <ul style="list-style-type: none"> <li>- That portion lying east of Polen Drive and north of Badlands Rd</li> </ul> </li> <li>- SE<math>\frac{1}{2}</math> of the NE<math>\frac{1}{4}</math> of the SE<math>\frac{1}{4}</math> <ul style="list-style-type: none"> <li>- That portion lying south of Badlands Rd</li> </ul> </li> </ul> </li> </ul>	VOCs	<u>Minimum Special Requirements</u> Ten-inch diameter upper enlarged drillhole to a minimum depth of 50 feet into the Cambrian Sandstone.  Entire annular space shall be sealed with neat cement grout using a pressure method according to the requirements of s NR 812.20, Wis. Adm. Code.  All wells shall be sampled for VOCs within 30 days of completion, and annually until the Department determines sampling is no longer required. <u>Cost of sampling is a responsibility of the well owner unless other parties volunteer or are ordered by DNR to sample.</u>  VARIANCES: A variance to these special casing requirements may be granted with conditions. Contact DNR Northern District Office for variance requirements.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Saint Croix 11/11/02 <b>Area 32a</b>	Town of Star Prairie ( <i>City of New Richmond Landfills Area</i> ) T31N, R18W <ul style="list-style-type: none"> <li>- Sections 21               <ul style="list-style-type: none"> <li>- NE¼                   <ul style="list-style-type: none"> <li>- That portion lying east of the Apple River and south of CTH “C”</li> </ul> </li> <li>- SE¼                   <ul style="list-style-type: none"> <li>- That portion lying east of the Apple River</li> </ul> </li> </ul> </li> <li>- Section 22               <ul style="list-style-type: none"> <li>- NW¼ of the NW¼                   <ul style="list-style-type: none"> <li>- That portion lying west of 110<sup>th</sup> Street and south of CTH “C”</li> </ul> </li> <li>- SW¼ of the NW¼</li> <li>- SW¼ of the SE¼</li> <li>- SW¼</li> </ul> </li> <li>- Section 27               <ul style="list-style-type: none"> <li>- NW¼</li> <li>- W½ of the NE¼</li> <li>- NW¼ of the SE¼</li> <li>- N½ of the SW¼</li> </ul> </li> <li>- Section 28               <ul style="list-style-type: none"> <li>- N½ of the NE¼</li> <li>- SE¼ of the NE¼</li> <li>- N½ of the SW¼ of the NE¼</li> </ul> </li> </ul>	VOCs	<u>Minimum Special Requirements</u> Ten-inch diameter upper enlarged drillhole to a minimum depth of 50 feet into the Cambrian Sandstone.  Entire annular space shall be sealed with neat cement grout using a pressure method according to the requirements of s NR 812.20, Wis. Adm. Code.  All wells shall be sampled for VOCs within 30 days of completion, and annually until the Department determines sampling is no longer required. <u>Cost of sampling is a responsibility of the well owner unless other parties volunteer or are ordered by DNR to sample.</u>  VARIANCES: A variance to these special casing requirements may be granted with conditions. Contact DNR Northern District Office for variance requirements.
Saint Croix June, 2002 <b>Area 32b</b>	Town of Warren ( <i>Junker Landfill Area</i> ) T29N, R18W <ul style="list-style-type: none"> <li>- Section 19               <ul style="list-style-type: none"> <li>- NW¼ of the NW¼                   <ul style="list-style-type: none"> <li>- That portion lying south of STH 12 and south of the Railroad Right of Way</li> </ul> </li> <li>- S½ of the NW¼</li> <li>- N½ of the SW¼</li> <li>- SE¼ of the SW¼</li> <li>- W½ of the SE ¼</li> <li>- S½ of the SW¼ of the NE¼</li> </ul> </li> </ul>	VOCs	<u>Minimum Special Requirements</u> Ten-inch diameter upper enlarged drillhole to a minimum depth of 50 feet into the Cambrian Sandstone.  Entire annular space shall be sealed with neat cement grout using a pressure method according to the requirements of s NR 812.20, Wis. Adm. Code.  All wells shall be sampled for VOCs within 30 days of completion, and annually until the Department determines sampling is no longer required. <u>Cost of sampling is a responsibility of the well owner unless other parties volunteer or are ordered by DNR to sample.</u>  VARIANCES: A variance to these special casing requirements may be granted with conditions. Contact DNR Northern District Office for variance requirements.
Sauk 08/16/00 <b>Area 69</b>	Town of Spring Green ( <i>Lower Wisconsin River Area</i> ) T8N, R3E <ul style="list-style-type: none"> <li>- Sections 2, 3, 4, 5, 8, 9, 10 &amp; 11 (Entire sections)</li> </ul>	Potential difficulty to keep drillhole open	<u>Recommended</u> Percussion drilling method should be used instead of a rotary method.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Sauk 08/14/00 <b>Area 33</b>	Town of Excelsior ( <i>Sauk County Landfill Area</i> ) T12N, R5E <ul style="list-style-type: none"> <li>- Section 14 <ul style="list-style-type: none"> <li>- SW<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub></li> <li>- W<sup>1</sup>/<sub>2</sub>, SW<sup>1</sup>/<sub>4</sub></li> </ul> </li> <li>- Section 15 <ul style="list-style-type: none"> <li>- SE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub></li> <li>- E<sup>1</sup>/<sub>2</sub>, SE<sup>1</sup>/<sub>4</sub></li> <li>- SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub></li> <li>- S<sup>1</sup>/<sub>2</sub>, SW<sup>1</sup>/<sub>4</sub></li> </ul> </li> <li>- Section 22 <ul style="list-style-type: none"> <li>- N<sup>1</sup>/<sub>2</sub>, NW<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub></li> <li>- N<sup>1</sup>/<sub>2</sub>, NE<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub></li> <li>- N<sup>1</sup>/<sub>2</sub>, NW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub></li> <li>- N<sup>1</sup>/<sub>2</sub>, NE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub></li> </ul> </li> </ul>	VOCs	Contact DNR South Central Region Office for <u>required</u> casing depth requirements and map of affected area
Sauk 01/01/05 <b>Area 80a</b>	Town of Excelsior ( <i>West Wastewater Land-Spreading Site</i> ) T12N, R5E <ul style="list-style-type: none"> <li>- Section 2 <ul style="list-style-type: none"> <li>- S<sup>1</sup>/<sub>2</sub>, SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub></li> <li>- SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>,</li> </ul> </li> <li>- Section 11 <ul style="list-style-type: none"> <li>- N<sup>1</sup>/<sub>2</sub>, NW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub></li> <li>- NW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub></li> </ul> </li> </ul>	BOD, Chlorides, COD, Kjeldahl Nitrogen, Ammonia, Sodium	A minimum of 200 feet of cement-grouted casing. The upper enlarged drillhole shall be constructed using rotary mud-circulation and shall be at least 3 inches larger in diameter than the nominal diameter of the permanent well casing pipe. Either the Bradenhead Method or the Grout Shoe Method shall be used to cement-grout the annular space. Well driller shall provide 24 hours advance notice prior to construction of any well.
Sauk 01/01/05 <b>Area 80b</b>	Town of Excelsior ( <i>East Wastewater Land-Spreading Site</i> ) T12N, R5E <ul style="list-style-type: none"> <li>- Section 4 <ul style="list-style-type: none"> <li>- S<sup>1</sup>/<sub>2</sub>, SE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub></li> </ul> </li> <li>- Section 9 <ul style="list-style-type: none"> <li>- NE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub></li> </ul> </li> </ul>	BOD, Chlorides, COD, Kjeldahl Nitrogen, Ammonia, Sodium	A minimum of 200 feet of cement-grouted casing. The upper enlarged drillhole shall be constructed using rotary mud-circulation and shall be at least 3 inches larger in diameter than the nominal diameter of the permanent well casing pipe. Either the Bradenhead Method or the Grout Shoe Method shall be used to cement-grout the annular space. Well driller shall provide 24 hours advance notice prior to construction of any well.
Sauk 01/01/05 <b>Area 80c</b>	Town of Excelsior ( <i>Cannery Waste &amp; Silage Storage Site</i> ) T12N, R5E <ul style="list-style-type: none"> <li>- Section 5 <ul style="list-style-type: none"> <li>- SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub></li> <li>- SE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub></li> </ul> </li> <li>- Section 8 <ul style="list-style-type: none"> <li>- NE<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub></li> <li>- NW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub></li> </ul> </li> </ul>	BOD, Chlorides, COD, Kjeldahl Nitrogen, Ammonia, Sodium	A minimum of 200 feet of cement-grouted casing. The upper enlarged drillhole shall be constructed using rotary mud-circulation and shall be at least 3 inches larger in diameter than the nominal diameter of the permanent well casing pipe. Either the Bradenhead Method or the Grout Shoe Method shall be used to cement-grout the annular space. Well driller shall provide 24 hours advance notice prior to construction of any well.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Sawyer 12/29/95 <b>Area 34a</b>	Town of Hayward ( <i>City of Hayward Landfill Area</i> ) T41N, R9W - Sections 28, 29, 32, and 33 Those portions of Sections 28, 29, 32, and 33 near their common corner. The area of includes: North of the Namekagon River; east of the unnamed Namekagon River tributary; south of a line between the southwest corner of the City of Hayward's abandoned landfill and the intersection of the unnamed tributary and Highway 63; and west of a line running from the southeast corner of the landfill to the intersection of Highway 63 and Stress Road and then running south along the unnamed dirt road and continuing to the Namekagon River.	Landfill Leachate	<u>Recommended</u> 100-foot casing <u>required</u> . (A variance <u>must</u> be obtained to construct any well that will be within 1,200 feet from the landfill.)
Sawyer 09/30/96 <b>Area 34b</b>	Town of Hayward ( <i>City of Hayward Landfill Area</i> ) T41N, R9W - Section 33 - Portions of the S½ of NW¼	VOCs	Contact DNR Northern Region Office in Spooner for better definition of affected area and casing <u>required</u> depth.
Shawano 3/84 02/25/88 <b>Area 35</b>	Town of Grant ( <i>Village of Caroline</i> ) T26N, R13E - Section 23 - NE¼ and NW¼ - That portion of land lying within 300 feet of the intersection of County Highway M and East Water Street, and that land parcel that lies between County Highway M and the Embarrass River extending to the southeast all the way to the eastern boundary of the SW¼ of the NE¼.	Gasoline	65 feet of casing or casing extending to the top of the granite <u>required</u> .
Sheboygan 12/01/02 <b>Area 73a</b>	Town of Greenbush (South Part) ( <i>City of Plymouth Landfill</i> ) T15N, R20E - Section 36 - NE¼ and SE¼ of the NW¼ - NE¼ of the SW¼ - NW¼ and NE¼ of the SE¼ - N½ of SE¼ of the SE¼ - N½ of SW¼ of the SE¼ - NE¼ Town of Plymouth T15N, R21E - Section 31 - NW¼ of the SW¼ - SE¼ of the NW¼ - NW¼ and NE¼ of the SW¼	VOCs	<u>Required</u> 1. That any new or replacement well be constructed by drilling through the glacial aquifer into the top 5 feet of bedrock, set permanent well casing, and seal the annular space with neat cement grout, and then drill an open drillhole into the bedrock. 2. That any new or replacement well be tested for volatile organic chemicals and that this information be submitted to the department within 60 days from the date of well construction. Certified laboratory lists can be obtained from the WDNR website or from drinking water supply staff.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Sheboygan 12/01/02 <b>Area 73b</b>	<p>Town of Greenbush (South Part) (<i>City of Plymouth Landfill</i>) T15N, R20E</p> <ul style="list-style-type: none"> <li>- Section 36</li> <li>- NW¼ and SW¼ of the NW¼</li> <li>- NW¼, SW¼ and SE¼ of the SW¼</li> <li>- S½ of the SE¼</li> <li>- S½ of the SW¼ of the SE¼</li> </ul> <p>Town of Plymouth T15N, R21E</p> <ul style="list-style-type: none"> <li>- Section 31</li> <li>- NE¼ of the NW¼</li> <li>- NW¼ and SW¼ of the NE¼</li> <li>- NE¼ and SE¼ of the NE¼</li> <li>- Those portions located to the west of the ordinary high water mark of Ben Nutt Creek</li> <li>- NW¼ of the SE¼</li> <li>- NE¼, the SW¼</li> <li>- Those portions located to the west of the ordinary high water mark of Ben Nutt Creek</li> <li>- SE ¼ of the SE¼</li> <li>- Those portions located to the west of the ordinary high water mark of Ben Nutt Creek</li> </ul>	VOCs	<p><u>Recommended</u></p> <ol style="list-style-type: none"> <li>1. While normal NR 812 construction is <u>required</u>, driller and/or owner contact with WDNR staff before well construction in this area is recommended.</li> <li>2. That any new or replacement well be tested for VOCs and that this information be submitted to the department within 60 days from the date of well construction. Certified laboratory lists can be obtained from the WDNR website or from drinking water supply staff.</li> </ol>
Sheboygan 01/22/97 <b>Area 36a</b>	<p>Town of Sheboygan (<i>Interstate Plaza Truck Stop LUST Case</i>) T15N, R23E</p> <ul style="list-style-type: none"> <li>- Section 5</li> <li>- That portion of Section 5 extending 400 feet north from the intersection of Hwy J and N. 47<sup>th</sup> Street, then east 1,200 feet to the edge of Hwy I-43, then south 1,000 feet along the I-43 right-of-way into Section 8, then returning northwesterly 1,300 feet to the starting point at the intersection of Hwy J and N. 47<sup>th</sup> Street.</li> </ul>	Petroleum	120 feet of casing <u>required</u>
Sheboygan 01/22/97 <b>Area 36b</b>	<p>Town of Sheboygan (<i>Interstate Plaza Truck Stop LUST Case</i>) T15N, R23E</p> <ul style="list-style-type: none"> <li>- Section 9</li> <li>- That portion of Section 9 bounded on the north by the section line (Jay Road), on the south by the Pigeon River, on the east by the section line, and on the west by a line running parallel 300 feet west of the Hwy 42 right-of-way.</li> </ul>	Petroleum	200 feet of casing <u>required</u>

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Sheboygan 01/22/97 <b>Area 37</b>	Town of Sheboygan ( <i>Town of Sheboygan Landfill, Spielvogel Landfill, Old Town of Sheboygan Dump</i> ) T15N, R23E - Section 16 - W½ - Section 17 - E½ - Section 20 - E½ of the NE¼ - Section 21 - NW¼	VOCs	200 feet grouted casing into bedrock <u>required</u>
Walworth 01/16/91 <b>Area 38</b>	Town of East Troy ( <i>Miramar Subdivision</i> ) T4N, R18E - Section 10 - E½ (Those portions north of Potter Lake.) - Section 11 - W½, except for the portion south of Potter Lake.	Bacteria and Detergents	<u>Recommended</u> 80 feet casing
Walworth 01/16/91 <b>Area 39a</b> (Segment B)	Town of East Troy ( <i>Town of East Troy Landfill</i> ) T4N, R18E - Section 15 - NW¼ of the SW¼ - Section 16 - NE¼ of the SE¼	Landfill Leachate	Casing at least to the top of bedrock <u>required</u> .
Walworth 01/16/91 <b>Area 39b</b> (Segments A, C & D)	Town of East Troy ( <i>Town of East Troy Landfill</i> ) T4N, R18E - Section 15 - S½ of the SW¼ - NE¼ of the SW¼ - S½ of the NW¼ - Section 16 - SW¼ - S½ of the NW¼ - S½ of the NE¼ - NW¼ of the SE¼ - S½ of the SE¼ - Section 21 - N½ of the NE¼ - N½ of the NW¼	Landfill Leachate	<u>Recommended</u> Casing to top of bedrock
Washington 01/16/91 <b>Area 40</b>	Town of Barton ( <i>Metal Working Site</i> ) T12N, R19E - Section 27 - SE¼ (That portion lying west of the Milwaukee River.)	VOCs	<u>Recommended</u> Casing to extend 60 feet into bedrock

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Washington 01/16/91 <b>Area 41a</b> (Segments C, D & F) (Also see Area 49)	Town of Barton ( <i>City of West Bend Landfill</i> ) (Schuster Drive Area) T11N, R19E <ul style="list-style-type: none"> <li>- Section 3</li> <li>- S½ of the S½ of the SW¼ (Segment D)</li> <li>- Section 4</li> <li>- S½ of the S½ of the SE¼ (Segment C)</li> <li>- Section 9 (Segment F)</li> <li>- E½ (excluding the southern 620 feet)</li> <li>- NE¼ of the SW¼</li> <li>- E½ of the NW¼</li> <li>- Section 10 (Segment F)</li> <li>- W½ (excluding the southern 620 feet)</li> <li>- W½ of the SE¼ (excluding the southern 620 feet)</li> <li>- SW¼ of the NE¼</li> </ul>	VOC	Cement-grouted casing <u>required</u> to extend to the base of the Maquoketa Shale
Washington 01/16/91 <b>Area 41b</b> (Segments A, B, E & G) (Also see Area 49)	Town of Barton ( <i>City of West Bend Landfill</i> ) (Schuster Drive Area) T11N, R19E <ul style="list-style-type: none"> <li>- Section 3</li> <li>- S½ (excluding the S½ of the S½ of the SW¼)</li> <li>- Section 4</li> <li>- S½ (excluding the S½ of the S½ of the SE¼)</li> <li>- Section 9</li> <li>- W½ of the W½</li> <li>- SE¼ of the SW¼</li> <li>- E½ (the southern 620 feet)</li> <li>- Section 10</li> <li>- E½ of the E½</li> <li>- NW¼ of the NE¼</li> <li>- SW¼ of the SE¼ (the southern 620 feet)</li> <li>- SW¼ (the southern 620 feet)</li> </ul>	VOC	<u>Recommended</u> Cement-grouted casing to extend to the base of the Maquoketa Shale
Washington 01/16/91 <b>Area 42a</b>	Town of Germantown ( <i>Rockfield LUST Site</i> ) (very high bedrock area) T9N, R20E <ul style="list-style-type: none"> <li>- Sections 9 and 10</li> </ul> <p>Those portions that are 500 feet to the east, 500 feet to the west, 200 feet to the north, and 300 feet to the south of the intersection of Rockfield Road and CTH G (Division Road)</p>	Gasoline	100' of cement-grouted casing <u>required</u>
Washington 01/16/91 <b>Area 42b</b>	Town of Germantown ( <i>Rockfield LUST Site</i> ) (very high bedrock area) T9N, R20E <ul style="list-style-type: none"> <li>- Section 9</li> <li>- NE¼ of the SE¼</li> <li>- Section 10</li> <li>- NW¼ of the SW¼</li> </ul>	Bacteria, Gasoline, Nitrate	<u>Recommended</u> 80' of casing

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Washington 01/22/97 <b>Area 43</b>	Town of Germantown ( <i>Willow Creek Area</i> ) T9N, R20E - Section 29 - SW¼ of the SW¼ - Section 32 - NW¼ of the NW¼	Gasoline	<u>Recommended</u> 150' cement grouted casing pipe
Washington 01/22/97 04/09/98 <b>Area 44/55</b> (Segment B)	Town of Germantown ( <i>Happy Hollow Subdivision Area</i> ) T9N, R20E - Section 31 - S½ of the SW¼	Gasoline	<u>Recommended</u> 220' of casing
Washington 01/22/97 04/09/98 <b>Area 44/55</b> (Segment A)	Town of Richfield ( <i>Amy Bell Road Site</i> ) T9N, R19E - Section 36 - SE¼ of the SE¼  (Also see requirements in Waukesha County, Village of Menomonee Falls, Section 6 and Town of Lisbon, Section 1)	Gasoline	<u>Recommended</u> 220' of casing
Washington 01/22/97 <b>Area 45</b>	Town of Richfield ( <i>Goetz Garage LUST Site</i> ) T9N, R19E - Section 12 and 13 - That portion of Section 12 which lies one-eighth mile north of County Hwy 167 and that portion of Section 13 which lies one-eighth mile south of County Hwy 167 and bounded on the west by County Hwy 175 and on the east by the C.M. St. P. & P. Railroad right-of-way. (Five wells replaced by PECFA)	Gasoline	100' of casing into bedrock <u>required</u>
Washington 06/12/2013 <b>Area 100</b>	Town of Jackson ( <i>West Shore Pipeline Spill Site</i> ) T10N,R20E - Section 21 - S½ of the SW¼ - Section 27 - SW¼ of the NW¼ - W½ of the S ¼ - Section 28 - S ½ - NW¼ - W½ of the NW¼ of the NE¼ - S½ of the NE¼ - Section 29 - SE¼ of the NE¼ - E½ of the NE¼ of the NE¼ - E½ of the SE¼ - Section 32 - NE¼ of the NE¼ - Continued on next page-	Gasoline	Wells must be double cased through the Maquoketa Shale into the Galena/Platteville Dolomite. Contact DNR Drinking Water Program in Central Office for a copy of the complete specification. All newly constructed wells shall be sampled for Petroleum Volatile Organic Compounds within 30 days of completion of well.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
	<ul style="list-style-type: none"> <li>- Continued from previous page-</li> </ul> Town of Jackson ( <b>West Shore Pipeline Spill Site</b> ) T10N, R20E <ul style="list-style-type: none"> <li>- Section 33</li> <li>- N½ of the N½</li> <li>- Section 34</li> <li>- NW¼ of the NW¼</li> </ul>		
Washington 01/22/91 <b>Area 46a</b> (Segments F & G)	Town of Jackson ( <b>Division Road high bedrock area</b> ) T10N, R20E <ul style="list-style-type: none"> <li>- Section 27</li> <li>- E½ of the NW¼</li> <li>- NW¼ of the NW¼</li> <li>- W½ of the NE¼</li> <li>- Section 28</li> <li>- NE¼ of the NE¼</li> </ul>	Bacteria, Nitrate	Minimum of 220' cement grouted casing <u>required</u>  ( <u>Recommend</u> all wells be sampled for nitrate.)
Washington 01/22/91 <b>Area 46b</b> (Segments B, C, D & E)	Town of Jackson ( <b>Division Road high bedrock area</b> ) T10N, R20E <ul style="list-style-type: none"> <li>- Section 21</li> <li>- SE¼</li> <li>- Section 22</li> <li>- SW¼</li> <li>- Section 27</li> <li>- E½ of the NE¼</li> <li>- E½ of the SW¼</li> <li>- Section 28</li> <li>- W½ of the NE¼</li> </ul>	Bacteria, Nitrate	Minimum of 120' cement grouted casing <u>required</u>  ( <u>Recommend</u> all wells be sampled for nitrate.)
Washington 01/16/91 <b>Area 46c</b> (Segments A-G)	Town of Jackson ( <b>Division Road high bedrock area</b> ) T10N, R20E <ul style="list-style-type: none"> <li>- Sections 21, 22, 27 and 28 (Entire sections)</li> </ul>	Bacteria, Nitrate	<u>Recommended</u> That all new and existing wells be sampled for nitrate.
Washington 01/16/91 <b>Area 47</b>	Town of Polk (Ackerville) ( <b>Town Dump &amp; Landfill Site</b> ) T10N, R19E <ul style="list-style-type: none"> <li>- Section 20</li> <li>SE¼</li> </ul>	VOCs	210 feet of casing <u>required</u>
Washington 01/16/91 <b>Area 48</b>	Town of Wayne ( <b>Kohlsville LUST Site</b> ) T12N, R18E <ul style="list-style-type: none"> <li>- Section 26</li> <li>- SW¼ of the SW¼ of the SW¼</li> <li>- That portion lying south of the Kohlsville River</li> <li>- Section 27</li> <li>- SE¼ of the SE¼ of the SE¼</li> <li>- That portion lying south of the Kohlsville Mill Pond and 200 feet west of CTH W</li> <li>- Section 34</li> <li>- NE¼ of the NE¼ of the NE¼ (The east 200 feet)</li> </ul>	Gasoline	150 feet of casing <u>required</u>

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
	<ul style="list-style-type: none"> <li>- Section 35</li> <li>- NW¼ of the NW¼ of the NW¼</li> </ul>		
Washington 01/22/97 <b>Area 49</b> (Also see Area 41)	Town of West Bend ( <i>City of West Bend Landfill Area</i> ) T11N, R19E <ul style="list-style-type: none"> <li>- Sections 15 and 16 (Entire sections)</li> </ul> (Also, see requirements for Area 41: Washington County, Town of Barton, Sections 3, 4, 9 & 10)	VOCs	<u>Recommended</u> Cement-grouted casing to extend to the base of the Maquoketa Shale
Washington 01/22/97 <b>Area 50</b>	Town of West Bend ( <i>Silver Lake Highland Subdivision</i> ) T11N, R19E <ul style="list-style-type: none"> <li>- Section 27</li> <li>- SE¼ of the SE¼</li> <li>- That portion within 1,000 feet of 18th Avenue (along Quass Drive).</li> </ul>	Methane gas	<u>Recommended</u> Construction of a bedrock well to avoid naturally occurring methane gas in gravel aquifer at 108 feet.
Washington 04/01/11 <b>Area 95</b>	Town of Trenton ( <i>Also 'Special Area of Well Compensation Eligibility'</i> ) T11N, R20E <ul style="list-style-type: none"> <li>- W ½ of W ½ of Section 1 &amp; the E ½ of the E ½ of Section 2</li> </ul> (Total of eight quarter-quarter sections of area)	Livestock- related bacteria (Bovine bacteroides)	<u>Required</u> : Cement-grouted casing to a minimum depth of 150 feet; upper-enlarged drillhole. a minimum diameter of 8-3/4 inches; use of Bradenhead Grouting Method only
Waukesha 11/08/63 <b>Area 57</b>	City of Brookfield ( <i>Hill 'n Dale Subdivision</i> ) (High & creviced bedrock) T7N, R20E (Also see Town of Pewaukee) <ul style="list-style-type: none"> <li>- Section 7</li> <li>- W½ of the SW¼</li> <li>- SW¼ of the NW¼</li> <li>- Section 18</li> <li>- NW¼ of the NW¼</li> </ul>	Bacteria	135 feet of cement-grouted casing <u>required</u> .

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Waukesha 12/01/77 <b>Area 51</b>	Town of Delafield ( <i>Nickel Landfill Site</i> ) T7N, R18E <ul style="list-style-type: none"> <li>- Section 21               <ul style="list-style-type: none"> <li>- S½ of the NE¼</li> <li>- NW¼</li> <li>- NE¼ of the SW¼</li> <li>- N½ of the SE¼ of the SW¼</li> <li>- N½ of the NW¼ of the SW¼</li> <li>- SE¼</li> </ul> </li> <li>- Section 22               <ul style="list-style-type: none"> <li>- SW¼ of the NE¼</li> <li>- S½ of the NW¼</li> <li>- W½ of the SE¼</li> <li>- SW¼</li> </ul> </li> <li>- Section 27               <ul style="list-style-type: none"> <li>- N½ of the NW¼</li> <li>- N½ of the SW¼ of the NW¼</li> <li>- N½ of the S½ of the SW¼ of the NW¼</li> <li>- NW¼ of the NE¼</li> </ul> </li> <li>- Section 28               <ul style="list-style-type: none"> <li>- NE¼ of the NE¼</li> <li>- N½ of the SE¼ of the NE¼</li> <li>- N½ of the S½ of the SE¼ of the NE¼</li> </ul> </li> </ul>	VOCs, Landfill Leachate	Cement-grouted casing to extend to the base of the Maquoketa Shale <u>required</u>
Waukesha 09/08/70 <b>Area 52a</b>	Town of Genesee ( <i>Saylesville Pond Area – high limestone bedrock area</i> ) T6N, R18E <ul style="list-style-type: none"> <li>- Section 23               <ul style="list-style-type: none"> <li>- SE¼</li> </ul> </li> <li>- Section 24               <ul style="list-style-type: none"> <li>- SW¼</li> </ul> </li> <li>- Section 25               <ul style="list-style-type: none"> <li>- W½</li> </ul> </li> <li>- Section 26               <ul style="list-style-type: none"> <li>- E½</li> </ul> </li> </ul>	Bacteria	200 feet of cement-grouted casing <u>required</u>

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Waukesha 09/08/70 Revised 10/12/11 <b>Area 52b</b>	Town of Genesee ( <i>Saylesville Pond Area – high limestone bedrock area</i> ) T6N, R18E [Within ½-mile of Area 52a (above), except for the N ½ of Sec. 35] Section 23 - NE¼ - W½ - Section 24 - NW¼ - E½ - Section 25 - E½ - Section 26 - W½ - Section 36 - N½	Bacteria	200 feet of cement-grouted casing or special approval <u>required</u>
Waukesha 12/31/58 <b>Area 59b</b>	Village of Lannon ( <i>Incorporated Village Area</i> ) (high bedrock area) T8N, R20E - Section 8 - Most of the S½ except for the W½ of the SW¼ thereof. - Section 17 except for the W½ of the NW¼ thereof. - Section 18 - S½ - Section 19 - That portion of the W½ lying west and north of STH 74. - That portion of the NE¼ lying NW of STH 74 and north of the Village limit (lying south of Forest View Ave). - Section 20 - The N½ except for a small parcel in the SW corner thereof.	Bacteria	100 feet of cement-grouted casing or special approval <u>required</u>
Waukesha 12/31/58 <b>Area 53a</b>	Town of Lisbon ( <i>High bedrock &amp; quarries area</i> ) T8N, R19E (Including the Village of Sussex) - Sections 1 through 36. (Entire Township) Any location that is between 1,200 feet and ½ mile of a quarry. [If the well will be within 1,200 feet of a quarry the well must be constructed to meet the requirements of s. NR 812.12(16), i.e. the minimum casing depth must be referenced from the bottom of the quarry.]	Bacteria	100 feet or special approval <u>required</u>
Waukesha 01/16/91 <b>Area 53b</b>	Town of Lisbon ( <i>High bedrock &amp; quarries area</i> ) T8N, R19E - Slightly greater than ½ mile of quarries or rock outcrops	Bacteria	<u>Recommended</u> 100 feet of casing

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Waukesha 01/22/97 <b>Area 55/44</b> (Segment D)	Town of Lisbon ( <b><i>Rapid Mart LUST Site</i></b> ) ( <b><i>Happy Hollow Subd Area</i></b> ) T8N, R19E - Section 1 - That portion that is bounded by lines 200 feet south of the centerline of Hwy Q and 300 feet west of the centerline of Hwy V  (Also, see requirements in Village of Menomonee Falls and in Washington Co., Town of Germantown and Town of Richfield.)	Gasoline	220 feet of casing <u>required</u>
Waukesha 01/22/97 <b>Area 54/58</b> (Segment A)	Town of Lisbon ( <b><i>Village of Sussex</i></b> ) T8N, R19E - Sections 22, 25, 26, 27, 34, 35 and 36 (Entire sections)	Bacteria	150 feet of casing or special approval <u>required</u>
Waukesha 01/22/97 <b>Area 55/44</b> (Segment C)	Village of Menomonee Falls ( <b><i>Rapid Mart LUST Site</i></b> ) T8N, R20E - Section 6 - That portion bounded by lines 200 feet south of the center line of Hwy Q and 300 feet east of the center line of Hwy V.  (Also, see requirements: Washington County, Town of Germantown, Section 31 and Town of Richfield, Section 36 and Waukesha County, Town of Lisbon, Section 1)	Gasoline	220 feet of casing <u>required</u>
Waukesha 12/31/58 <b>Area 59a</b>	Village of Menomonee Falls ( <b><i>High Bedrock Area</i></b> ) T8N, R20E - Sections 1 through 36 (Entire Township) Any location that is between 1,200 feet and ½ mile of a quarry. [If the well will be within 1,200 feet from a quarry the well must be constructed to meet the requirements of s. NR 812.12(16), i.e. the minimum casing depth must be referenced from the bottom of the quarry.] (Also see Town of Lisbon Area 53a.)	Bacteria	100 feet of casing or special approval <u>required</u>
Waukesha 01/16/91 <b>Area 56b</b>	Town of Merton ( <b><i>Stonebank LUST Site</i></b> ) T8N, R18E - Section 19 - E½ of the SE¼ of the NW¼ - That portion of the SW¼ of the NE¼ of located west of Oconomowoc River	VOCs	Casing to the top of bedrock <u>required</u>
Waukesha 01/16/91 <b>Area 56a &amp; c</b>	Town of Merton ( <b><i>Stonebank LUST Site</i></b> ) T8N, R18E - Section 19 - W½ of the SE¼ of the NW¼ - That portion of the NW¼ of the SE¼ of located west of the Oconomowoc River	VOCs	<u>Recommended</u> Casing to the top of bedrock

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Waukesha 01/2004 <b>Area 67a</b>	City of Muskego – East Part ( <i>Muskego Landfill</i> ) T5N, R20E <ul style="list-style-type: none"> <li>- Section 17 <ul style="list-style-type: none"> <li>- SW¼ and NW¼ of the NW¼</li> <li>- SW¼ and NW¼ of the SW¼</li> </ul> </li> <li>- Section 18 <ul style="list-style-type: none"> <li>- SW¼ and SE¼ of the NE¼</li> <li>- SE¼ and SW¼ of the SW¼</li> <li>- The entire SE¼</li> </ul> </li> <li>- Section 19 <ul style="list-style-type: none"> <li>- NE¼ of the NE¼</li> <li>- NW¼ of the NE¼</li> <li>- N½ of the SE¼ of the NE¼</li> <li>- N½ of the SW¼ of the NE¼</li> <li>- NE¼ of the NW ¼</li> </ul> </li> </ul>	VOCs	<u>Recommended:</u> Connection to municipal water system. <u>Required:</u> 1. Contact the WDNR Southeast Region Office for updated construction requirements. 2. Any new water supply well constructed or an existing water supply well reconstruction shall be sampled upon completion and tested for volatile organic compounds (VOCs) using EPA Method 502.2 or 524.2 and the results sent to the DNR Southeast Region Office.
Waukesha 01/2004 <b>Area 67b</b>	City of Muskego – East Part Part ( <i>Muskego Landfill</i> ) T5N, R20E <ul style="list-style-type: none"> <li>- Section 17 <ul style="list-style-type: none"> <li>- NE¼, SW¼ and SE¼ of the SW¼</li> <li>- NE¼, NW¼ and SE¼ of the NW¼</li> </ul> </li> <li>- Section 18 <ul style="list-style-type: none"> <li>- NE¼ and NW¼ of the NE¼</li> </ul> </li> <li>- Section 19 <ul style="list-style-type: none"> <li>- S½ of the SE¼ of the NE¼</li> <li>- S½ of the SW¼ of the NE¼</li> <li>- SE¼, NW¼ and SW¼ of the NW¼</li> <li>- NE¼ of the SW¼</li> <li>- NW¼ and NE¼ of the SE¼</li> </ul> </li> <li>- Section 20 <ul style="list-style-type: none"> <li>- NW¼ and SW¼ of the SW¼</li> <li>- NW¼ of the SW¼</li> </ul> </li> </ul>	VOCs	<u>Recommended:</u> 1. Any new water supply well constructed or an existing water supply well reconstruction shall be sampled upon completion and tested for volatile organic compounds (VOCs) using EPA Method 502.2 or 524.2 and the results sent to the DNR Southeast Region Office. 2. Contact the WDNR Southeast Region Office for updated construction recommendations.
Waukesha 11/08/63 <b>Area 57</b>	Town of Pewaukee ( <i>Hill ‘n Dale Subdivision – High &amp; Creviced Bedrock Area</i> ) T7N, R19E (Also see City of Brookfield) <ul style="list-style-type: none"> <li>- Section 12 <ul style="list-style-type: none"> <li>- SE¼</li> <li>- S½ of the NE¼</li> </ul> </li> <li>- Section 13 <ul style="list-style-type: none"> <li>- N½ of the NE¼</li> </ul> </li> </ul> <p>(Also see Waukesha County, City of Brookfield for other segment of this area.)</p>	Bacteria	135 feet cement-casing <u>required</u>

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Waukesha 01/22/97 <b>Area 58</b> (Segment B)	Town of Pewaukee ( <i>High &amp; Creviced Bedrock Area</i> ) T7N, R19E - Section 1 N½ - Section 2 - N½	Bacteria	100 feet casing <u>required</u>
Waupaca 03/2/88 <b>Area 60</b>	Town of Waupaca ( <i>Waupaca Foundry</i> ) T22N, R12E - Section 28 - SW¼ - NW¼, that portion south of the Soo Line Railroad Tracks	VOCs	Contact DNR Northeast Region Office for <u>required</u> casing depth
Waushara 02/24/88 Revised 03/9/94 <b>Area 61</b>	City of Wautoma ( <i>Nine Separate Spills</i> ) T18N, R10E - Section 3 - NE¼, NE¼ (Private Residence) T19N, R10E - Section 34 - NW¼, SE¼ [Veteran's Memorial Building @ Hwy 22 & Main Street (Gasoline)] - NW¼, SE¼ [Citgo Station @ Intersection of Hwys 22 & 73 (Gasoline)] - NE¼, SE¼ [City of Wautoma Parking Lot (Gasoline)] - SE¼, SE¼ [F.S. Coop (Nitrate, Fertilizer, Herbicides & Pesticides)] - Section 35 - NE¼, SW¼ [Private Residence (Petroleum products)] - NE¼, SW¼ (Fuel oil spill) - NE¼, SW¼ [Diesel fuel spill from traffic accident (Now on city water)] - SW¼, SW¼ [F.S. Coop (Nitrate, Fertilizer, Herbicides & Pesticides)] - SW¼, SW¼ [Waushara County Fairgrounds (Nitrate, Fertilizer, Herbicides & Pesticides)] - SE¼, NW¼ [Private Residence (Petroleum product)] - NW¼, SW¼ (Waushara Electric Coop) - SW¼, NE¼ [Private Residence (At Intersection of Townline Rd and Hwy 21 East) (Gasoline VOC's)]	VOCs, Gasoline, Pesticides, Fertilizer, Herbicides	Contact DNR Northeast Region Office for <u>required</u> casing depth
Winnebago 10/01/04 11/12/04 09/14/05 <b>Area 79b</b>	Entire County ( <i>"Arsenic Requirement Area"</i> ) (This "Special Well Casing Depth Area" supercedes both the "Arsenic Advisory Area" and Areas 72 & 77, below.)	Naturally occurring inorganic arsenic	<u>Required</u> <b>Option A</b> – Galena-Platteville Dolomite Aquifer wells no deeper than the red numbers on the gray shaded areas of the Township maps. <b>Option B</b> – A well cased & cement-grouted at least to the Cambrian Sandstone to the depths indicated in black on the Township maps.

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Winnebago 04/22/02 08/03/02 <b>Area 72</b>	Town of Algoma ( <i>Town of Algoma/Omro Arsenic Area</i> ) T18N, R16E - Sections 7, 8, 9, & 10 - Those portions lying south of Lake Butte Des Morts - Sections 17, 18, 19, 20, 21, 28, 29, 30 - Entire sections	Arsenic – naturally occurring inorganic	<u>Required</u> Grouted casing to extend at least to the top of the Cambrian Sandstone (Contact DNR for map area and construction conditions.)
Winnebago 06/21/2004 <b>Area 77a</b>	Town of Clayton ( <i>Town of Clayton/Neenah Arsenic Area</i> ) T20N, R16E - Sections 25 and 26	Arsenic – naturally occurring inorganic	<u>Required</u> Grouted casing to extend at least to the top of the Cambrian Sandstone (Contact DNR for map area and construction conditions.)
Winnebago 04/22/02 08/03/02 <b>Area 72</b>	Town of Omro ( <i>Town of Algoma/Omro Arsenic Area</i> ) T18N, R15E - Section 1 - That portion lying south of Lake Butte Des Morts - Section 2 - SE ¼, that portion lying south of Lake Butte Des Morts - Section 11 - E½, that portion lying south of Lake Butte Des Morts - Section 12 - That portion lying south of Lake Butte Des Morts - Sections 13, 24 & 25 - Entire sections - Sections 14, 23 & 26 - E½	Arsenic – naturally occurring inorganic	<u>Required</u> Grouted casing to extend at least to the top of the Cambrian Sandstone (Contact DNR for map area and construction conditions.)
Winnebago 01/26/61 <b>Area 63a</b>	Town of Menasha ( <i>High Bedrock Area</i> )(Intersection of Hwy 150, Old Hwy 41 & Hwy II) T20N, R17E - Section 16, 17, 20 and 21 - Those portions located within ¼ mile of the intersection of Highway 150, Old Hwy 41 & Hwy II (the intersection and adjoining sections of 17, 20 & 21.)	Bacteria	80 feet of grouted casing <u>required</u>
Winnebago 01/26/61 <b>Area 63b</b>	Town of Menasha ( <i>High Bedrock Area</i> )( Intersection of Hwy 150, Old Hwy 41 & Hwy II) T20N, R17E - Section 16, 17, 20 and 21 - Those portions located between ¼ and ½-mile of the intersection of Highway 150, Old Hwy 41 & Hwy II (the adjoining sections located between Sections 16, 17, 20 & 21.)	Bacteria	60 feet of grouted casing <u>required</u>
Winnebago 06/21/2004 <b>Area 77b</b>	Town of Neenah ( <i>Town of Clayton/Neenah Arsenic Area</i> ) T20N, R17E - Sections 30 and 31	Arsenic – naturally occurring inorganic	<u>Required</u> Grouted casing to extend at least to the top of the Cambrian Sandstone (Contact DNR for map area and construction conditions.)

COUNTY	LOCATION	CONTAMINANT	CASING REQUIREMENTS
Winnebago 3/88 Revised 10/96 <b>Area 64</b>	Town of Winchester ( <i>LUST Site – Hwy 150</i> ) T20N, R15E - Section 13 - SW¼ - Section 14 - SE¼ - Section 23 - N½ of the NE¼ - Section 24 - N½ of the NW¼ - N½ of the S½ of the NW¼	Gasoline	100 feet of casing <u>required</u>
Wood 11/18/96 <b>Area 65</b>	Town of Sherry ( <i>Village of Sherry</i> ) (Buried Petroleum Tank Site) T24N, R5E - That portion of the NE¼ of the NW¼ and the SE¼ of the SW¼ of Section 4 that are north and west of CTH F; east of 2 <sup>nd</sup> Street and south of a line 150 feet north of CTH N (Main Street)	VOCs	100 feet of casing <u>required</u> ; hydrofracturing allowed <u>only</u> with Department approval.

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